

REMARKS

Claims 1, 7, 9, 11, 13, 15, 17 and 19 were rejected as being anticipated by Hirukawa and further in view of Hurakawa's admitted prior art HAPA. This rejection is respectfully traversed.

As pointed out in the last response, the semiconductor laser device disclosed in Hurakawa fails to disclose a "current blocking layer that consists of a solid layer" as claimed. Accordingly, in response the Examiner has cited the prior art device shown in Fig. 8 and hereinafter referred to as "HAPA".

In the Background of the Invention of Hurakawa describes the HAPA reference as follows:

[0008] In the above conventional example, the hollow portion is eliminated to stabilize transverse mode oscillation. However, an inventor of the present invention actually manufactured as an experiment an AlGaAs based high-output semiconductor laser device based on the conventional technique, as a result of which it was confirmed that a maximum optical output thereof is approx. 180 mW, and end face destruction occurs at this optical output level. This is because the presence of active Al tends to generate Al oxide on a laser end face, which prevents implementation of higher output, higher reliability and longer life.

[0009] Also in the above conventional example, the contact layer 505 and the second cladding layer 504 are etched into ridge stripe shape with an etchant modified to prevent the stripe-shaped contact layer 505 from protruding from the ridge-strip-shaped second cladding layer 504 in lateral direction like an overhang. This method, however, suffers difficulty in management of etchant and etching time.

Accordingly, Hirukawa itself points out that the elimination of the hollow portion in HAPA, results in a laser device that fails to provide high output, high reliability or long life. Accordingly, the whole purpose of Hirukawa is to correct these deficiencies. These deficiencies were correct by providing an active layer 105 composed of InGaAsP without Al (as a III-V compound containing at least P as V group element) as well as hollow portions 130 in the current blocking layer 112. Hirukawa also makes use of an InGaAsP active layer 105 having a smaller refractive index difference relative to the hollow portions for stabilizing a single transverse mode oscillation (See

[0015] and Fig. 1). In other words, the hollow portions in Hirukawa's semiconductor laser device are essential to the device in Hirukawa.

Accordingly, not only does Hirukawa not provide any motivation to remove the hollow portions, Hirukawa actually teaches against removing these portions. Specifically, Hirukawa states that the removal of the hollow portions provided several problems in HEPA that are corrected by including the hollow portions. Consequently, no one of ordinary skill in the art after reading Hirukawa would intentionally go against these teachings and remove the hollow portions as suggested by the Examiner.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue. If it is determined that a telephone conference would expedite the prosecution of this application, the Examiner is invited to telephone the undersigned at the number given below.

In the event the U.S. Patent and Trademark Office determines that an extension and/or other relief is required, applicant petitions for any required relief including extensions of time and authorizes the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to **Deposit Account No. 03-1952** referencing docket no. **204552032000**.

Dated: January 26, 2007

Respectfully submitted,

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